Addressing Iowa's Greatest Imperative:

All learners must be prepared for the 21st century

An Agenda for Change

A Report to the Governor and the Iowa Legislature
From the ITW Board of Directors

THE INSTITUTE FOR TOMORROW'S WORKFORCE

An Iowa Nonprofit Educational Foundation

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OUR VISION

All learners must be prepared for the 21st century. This means a postsecondary credential – diploma, college degree, license or certificate of employability. Without this, Iowa is unequipped for the global marketplace.

Our beliefs support our vision:

1. Every Iowa learner will have learning opportunities that provide a clear pathway to success.
2. Educational experiences will match students' interests and abilities, and meet the needs of the state and nation.
3. Learning expectations will be rigorous so graduates can compete anywhere in the world to the best of their abilities.
4. Learner effort and progress will be assessed through multiple measures of proficiency and achievement.
5. Students will move rapidly, yet smoothly, through a supportive and effective, yet efficient, statewide delivery system.
6. All learners will have access to and be guided by skilled, knowledgeable, and committed professionals.

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EXECUTIVE SUMMARY

The following topics and issues have been discussed at ITW Board of Directors meetings. This report summarizes the board's direction on issues facing Iowa's education system and is based on findings and recommendations from independent resources engaged by the executive director, i.e., Paslov Consulting (Utah), EdVisors (Massachusetts), and the Center for Teaching Quality (North Carolina). Additionally, members of the board of directors organized "opinion-leader" forums in seven communities statewide.

As expected, input gained from opinion-leader forums, education and workforce experts, the elected and state officials and from the ITW Board of Directors did not arrive in the form of easy consensus. Issues and concerns were tossed about and evaluated. But overall, remarkably similar priorities and clear understandings emerged. While any individual involved might perceive any given issue somewhat differently, there is no doubt whatsoever about the current status of Iowa's education approach: **Fundamental changes are required to create a capable workforce that sustains the economic well-being of Iowa and its people.**

Iowa Governor Tom Vilsack recently reinforced this conviction:

> *The bottom line is this: People in Iowa, people in America, have got to embrace change. There's just no way around it. The world is changing rapidly and if we don't change with it, change will basically dictate our life.*[1]

Our recommendations may be cause for concern for some communities. But if the question of what is best for our children is honestly answered, we believe that those concerns can and must be overcome.

The Essential Problem

In 1950, only about half of our young people graduated from high school, and we saw little reason to worry. Those who did not graduate could still find jobs and lead productive lives. This is no longer the case.

Now, for every 100 students starting ninth grade In Iowa, 83 graduate from high school within four years. Of that number, only 54 go on to college immediately after high school graduation. Of those, only 37 are in college the second year, and 28 of the original 100 students will get their associate's degree within three years of graduation or their bachelor's degree within six years of graduation.[2]

Vision

ITW believes Iowa's greatest imperative is that all learners are prepared for the 21st century. This means a postsecondary credential – diploma, college degree, license or certificate of employability – for all learners. Without this, Iowa young people are unequipped to compete in the global marketplace.

To achieve this vision, the Institute for Tomorrow's Workforce's Agenda for Change embraces one primary principle: ***Education in Iowa must be "performance-based."***

A. Learner Performance	B. Educator Performance	C. System Performance
All learners pre-Kindergarten through postsecondary will demonstrate proficiency in 21st-century skills and knowledge based on developmentally appropriate assessments showing growth through measurable performances.	Educator excellence (and the accompanying salaries for teachers and principals) will be based on performance within a system that values quality and rewards professional development in teaching and learning.	The state's entire education system pre-Kindergarten through postsecondary will be learner-centered and organized to support learners and demonstrate efficiencies based on 21st-century measures of organizational/ operational competency.

U.S. and Iowa at Pivotal Points

The United States is at a pivotal point. Virtually every major organization representing business, research and education, as well as government, science and statistics agencies and commissions, have extensively documented the critical situation in science, technology, engineering and mathematics. The indicators range from "measurable declines in U.S. innovation, such as patents and scientific articles, to soaring numbers of students in Asia majoring in these fields, to U.S. students' lagging interest and measured performance in math and science."[3]

While 40 of the 50 fastest growing occupations in the nation now require at least some education after high school, seven out of 10 students now graduate from high school without completing the courses needed to succeed in college or in the workplace. This trend is leading many employers to report difficulties in finding qualified employees. By 2010, the nation's workforce is expected to face a shortage of more than 12 million college-educated workers.

Our study reveals important concerns

- Local high school graduation requirements may be less than ACT recommendations for college success. In some Iowa high schools, a student can graduate with only two years each of math and science.
- Iowa ranks fourth nationally with preschoolers whose parents work out of the home. But Iowa ranks 40th nationally in the number of 4-year-olds enrolled in "accredited" preschools.
- There is a serious achievement gap between economically secure youth and economically insecure youth.
- ACT reports that too few of our students are prepared to enter the workforce or postsecondary education without additional training or remediation when they graduate from high school.
- Iowa spends less per pupil than five neighboring Midwestern states – often far less. Iowa ranks 36th in the nation in per-pupil expenditures, dropping from 25th in 1985-1986, and now at $1,058 below the national average (which computes to about $500 million per year). Programs started have not been sustained: minimum teacher salary increase, performance-based pay plan, school technology, and Phase III for professional development.
- Iowa's average teacher salary has slipped to 41st in the nation.
- Teachers in smaller districts hold fewer advanced degrees, suggesting they may not be as well prepared, lack easy access to continuing their own education and/or can't afford it.
- In districts with fewer than 250 students, just 7.7% of teachers hold advanced degrees. In districts with 7,500-plus students, the figure is 37.5% and in the middle enrollment category of 1,000 to 2,499 students, it's 23.9%.
- Teachers in smaller high schools are expected to handle more teaching assignments for different subjects than teachers in larger high schools.

Performance-based learning relies on "demonstrations" where students show publicly what they've learned, following "performance criteria" that are well understood. This could mean "project-based" experiences for all learners, pre-K and up, including science fairs, speech and drama exhibitions, recitals, etc., and annual "internships" for high school and college students . . . This can be an important analogy to help explain your vision for "performance-based" as it relates to teachers, schools and the statewide education system. It illustrates an alternative pathway to accountability.
– Summarized from Provocateur Dr. Sharon Robinson's comments to the ITW Board of Directors

Iowa's greatest imperative is that all learners are prepared for the 21st century. This means a postsecondary credential – diploma, college degree, license or certificate of employability. Without this, Iowa is unequipped for the global marketplace.

" . . . It's time to wake up and prepare ourselves."
Thomas Friedman
The World is Flat (2005)

Our Goal

By making Iowa's education system performance-based, we anticipate that, by year 2010, Iowa should double the number of its youth earning a postsecondary degree or certificate of employability; triple the number by 2015; and complete the vision of "a postsecondary credential for all" by 2020.

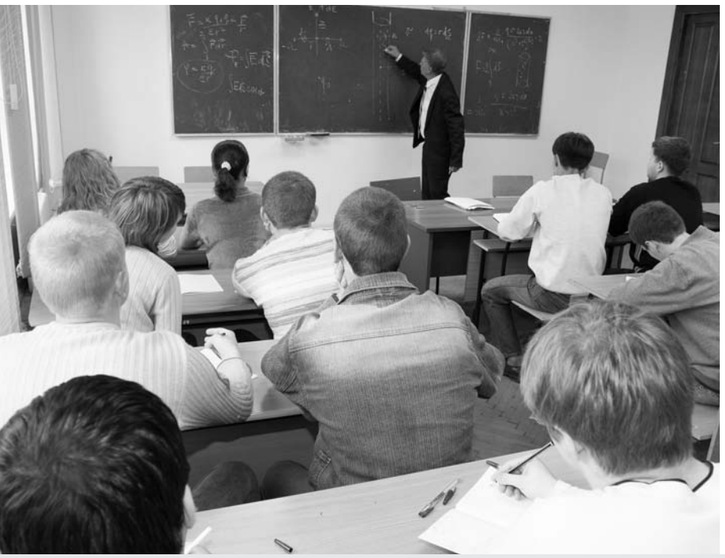
Our Strategy

Education in Iowa must be performance-based.

Students who meet performance expectations will move more quickly to postsecondary education. Using multiple and agreed-upon performance measures, **students** who meet performance expectations are rewarded by moving more quickly on to postsecondary education. Those students not meeting performance goals will be expected to invest more time in developing their skills, knowledge and values.

Teachers meeting performance expectations will receive normal increases in compensation. Using multiple and agreed-upon performance measures, which build upon the 2001 Teaching Standards, **teachers** exceeding expectations will receive larger increases and may be called upon to help other teachers understand how they have achieved their success. Teachers not meeting expectations will receive lower salary increases, but will be offered professional development opportunities to enhance their performance. Those unwilling or unable to grow to meet expectations will be counseled out of the profession.

School districts – and the agencies, colleges and departments that comprise the system – will perform efficiently and effectively to assure that both students and teachers have learning and working environments that allow them to achieve performance goals. The entire system will be guided by multiple and agreed-upon performance measures.



Getting Started

Both our Goal and our Strategy are long-term. Regrettably, **multiple and agreed-upon performance measures are not in place for any of the elements we mention.** Most is known about evaluating student performance, less about evaluating teacher performance objectively, and little is in place defining efficient and effective school districts, much less "a statewide system of schools."

As important as we believe performance-based evaluation is, we cannot afford to wait while appropriate criteria are established. So while our first recommendation is to begin work immediately to establish such criteria, our additional recommendations will be to take immediate steps based on what we do know.

Recommendations

Begin work immediately to establish performance criteria for students, teachers, school districts and the statewide system.

1. The ITW should work with stakeholders and external consultants (such as the Partnership for the 21st Century Skills) to establish both the content-area knowledge and skills and the assessments necessary to measure the content and skills to prepare Iowa learners for the demands of the 21st century. Immediately require all Iowa high schools to offer a core curriculum (such as that recommended by ACT) and increase the number of students taking the **complete** ACT assessment (including the Writing Test) with a target of 50 percent of all high school students. In addition, the average score in Iowa should be maintained at 22, which is currently one point above the national average. Require Iowa's public colleges and universities to accept performance-based proficiencies as the primary determiner of entry and enrollment requirements. Plan a three- to five-year strategy for replacing the significance of "class rank" and grade-point averages as basic indicators of college readiness with these new performance-based learner proficiencies that meet or exceed the old indicators. Adopt our recommended goal to increase postsecondary graduation and student retention rates.
   Estimated State Appropriation: $300,000.

2. Fund the 2001 Student Achievement/Teacher Quality Program to complete the state's commitment to the bold professional teacher performance/compensation model. Salaries for college and university faculty should be examined for competitiveness. To embark on the primary goal of improving teaching and learning and become more competitive in recruiting talented professionals who might otherwise leave the state or pursue another profession, immediately raise the minimum teaching salaries to a range of $32,000–$40,000, with a goal of moving from 41st nationally to 25th in average teachers' salaries. Add a market factor to the plan that would allow Iowa schools to attract teachers in low-supply categories and disciplines. The range in salary should recognize geographic wage differentials and provide incentives for traditionally hard-to-staff schools, subject-area shortages, and for improving the racial/ethnic diversity on local teaching staffs. This will begin the transition to a performance-based model by implementing the current teacher compensation legislation and alleviate Iowa's low national ranking in teacher salaries.
   Estimated State Appropriation: $150,000,000 annually in each of the next two years.

3. The legislature should establish an independent Commission of education stakeholders with the authority to establish a new performance-based, learner-centered educational delivery system. The Commission will submit its findings and recommendations to the governor, the Iowa Legislature, and the Department of Education, not later than January 15, 2007. The plan submitted will address the changes required including the alignment of local school districts, AEAs, higher education and the Iowa Department of Education, with specific quantitative and qualitative indicators and recommendations on management, governance, faculty salaries, services, boundaries, funding, optimum size and administrative efficiencies. The legislature should confer upon the Commission the authority to prepare a new delivery system, which will be implemented unless the legislature and the governor reject it.
   Estimated State Appropriation: $1,250,000.

4. Develop adequate financial support for a performance-based system. The ITW should conduct an independent and thorough review of how the pre-K–12 through community colleges system is financed. Redesigning the system to meet the new demands may require new thinking about financing and taxing structures as well as addressing adequacy, fairness and flexibility. Iowa must face the fact that its per-pupil funding is well below the national average. Clearly, support for education must be increased if our recommendations are adopted. We recommend that Iowa target the national average for per-pupil funding. We also believe that, once the national average in per-pupil expenditures is reached, a well-defined performance system (as anticipated by the above recommendations) could allow redistribution of resources that would add the last necessary margin. Immediate action should be taken this legislative session to secure the financial resources required to implement these recommendations and embark on a new Iowa educational system.
   Estimated State Appropriation: $500,000.

5. The State of Iowa, with the Institute for Tomorrow's Workforce and the private sector, should organize and deploy a public relations campaign (possibly in cooperation with other state or national initiatives) to heighten awareness of the critical situation described herein.

6. The ITW Board of Directors recommends legislative funding sufficient to maintain the ITW, its basic operational needs and to follow through on the recommendations made herein. To continue the public-private change efforts of the Institute, the original legislative appropriation of $250,000 should be matched by the private sector at $250,000.
   Estimated State Appropriation: $250,000.

A CASE FOR CHANGE: FINDINGS

The Essential Problem

Although Iowa reports an 88.9 percent high school graduation rate, less than one-fourth (22.5%) of the population 25 years and older has a bachelor's degree. This is below the national average of 26.5 percent and lowest in the Midwest. Only 6.8 percent (ranking 43rd nationally) of Iowans 25 years and older have an advanced degree as compared to 9.7 percent nationally.

Our Goal

By year 2010, Iowa should **double the number** of its youth earning a postsecondary degree or certificate of employability; **triple the number** by 2015; and **complete the vision** of "a postsecondary credential for all" by 2020.

Better and Faster: Accelerating Advancement in School and Work

By Hilary Pennington, Jobs for the Future
Address to the Aspen Institute Congressional Seminar, 2002

I have four key points to make:

- First, efforts to improve high school have to focus on where students go when they leave—that is, on their transition to postsecondary education and work.
- Second, if education beyond high school is the goal for all students, high school reform alone will not get us there.
- Third, the task is to create multiple pathways to and through the second year of college, not to reform the "one-size-fits-all" comprehensive high school.
- Fourth, Congress [and state legislatures] has a key leadership role to play in addressing these challenges, and now is the right time to do so.

I cannot stress this enough. Too many of our young people are not completing college at a time when American parents have become convinced that education beyond high school is necessary for their children to succeed. Given the current cost structures of higher education and the nation's patterns of demographic growth, we are on a collision course with the public unless we fundamentally rethink and restructure our system for a 21st-century education.

Bold but Attainable Goal

By 2010, achieving this goal will **erase the college dropout problem** among those students who currently fail to return their second year. By 2015, **all Iowa ninth-graders who stay in high school and graduate** will earn a postsecondary credential. By 2020, all Iowa students entering ninth grade will stay in high school and **graduate and complete an associate's or technical degree** within three years **or a bachelor's degree** within six years of high school graduation.

The Clear Rationale

A college graduate earns 70 percent more than a high school graduate. The growing income disparity in the United States relates closely to educational attainment.

- Conversely, the unemployment rate for high school dropouts is four times higher than for college graduates.
- Those who enter the workforce with little education will find it difficult, if not impossible, to catch up.
- Two years of postsecondary education has become the minimum if young people are to enter jobs that pay enough to sustain a family.[4]

While not all young people will or should enter college directly after high school, all will need some postsecondary education at some point if they are to progress in the labor market. The economic returns from gaining a postsecondary education are clear.

The National Center for Education Statistics "2004 Condition of Education Report" explains that among men with at least a bachelor's degree (vis-à-vis their peers with high school diplomas), the difference in median earnings rose from 19 percent in 1980 to 65 percent in 2002, an increase of 46 percent. Among women, the difference increased 34 percent.

While marketable skills are necessary, our plan and recommendations for 21st-century preparedness serve a broader goal of educating citizens who can pursue their dreams in life as well as in work.

Educated citizens must master the basics, but also ably use modern technology; rapidly accumulate knowledge; respond to global competition; and join a workforce with full capability for innovation, entrepreneurship and productivity. An educated citizen must learn more than the traditional 3Rs. They must also think, create, synthesize and evaluate information from many subjects and sources while understanding a wide variety of cultures. The 21st century requires that people read well, solve semistructured problems, effectively communicate orally and in writing, analyze complicated situations and work in diverse groups. In short, an educated citizen must **know how to learn**.

What We Have Learned

The Yardstick is Now "International"

The United States scored near the bottom in the "Trends in International Math and Science Survey" (2003) (TIMSS). Fifteen-year-olds in the United States rank near the bottom of industrialized countries in math skills, ahead of only Portugal, Mexico and three other nations, according to an international comparison. More recently (December 2004), the United States ranked 24th among 29 countries that are members of the Organization for Economic Cooperation and Development "Program for International Student Assessment" (PISA). Using the OECD's adjusted average score of 500 points, the United States scored 483 — 61 points behind top-scoring Finland and 51 points behind Japan. In a wider group that also included 10 nonmembers, many of them developing nations, the United States tied Latvia for 27th place. On TIMSS (2003), fourth-graders in three countries – Chinese Taipei, Japan, and Singapore – outperformed U.S. fourth-graders in both mathematics and science, while students in 13 countries turned in lower average mathematics and science scores than U.S. students. Fourth-grade students in the United States outperformed their peers in five OECD–member countries (Australia, Italy, New Zealand, Norway and Scotland) of which three are English-speaking countries (Australia, New Zealand and Scotland).

Once Iowa businesses could rely on Iowa-built machinery, natural resources and local labor to ensure economic growth. Today, knowledge and skills used with technology are **the driving forces in a global marketplace**. Employees must now constantly obtain, organize, analyze and creatively apply new information. Business and community leaders are keenly aware of this shift and of other countries' progress to adapt and excel. Iowa's workforce must be better prepared to meet **international competition**, especially in the biosciences, advanced manufacturing and information technology.

The vast majority of American (and Iowa) manufacturers are experiencing a serious shortage of qualified employees, which in turn significantly impacts businesses' ability to compete. More than 80 percent of U.S. manufacturers indicate that they are experiencing a shortage overall – with 13 percent reporting severe shortages and 68 percent indicating moderate shortages.

A recent report from the Thomas B. Fordham Institute suggests that the focus on reading and math as required subjects for testing under the federal law has turned attention away from science, contributing to a failure of American children to stay competitive in science with their counterparts abroad.[5]

The report also supports concerns raised by a growing number of university officials and corporate executives who say that the failure to produce students well prepared in science is undermining the country's production of scientists and engineers and putting the nation's economic future in jeopardy.

A physician we interviewed says Iowa's current approach misses the mark.

> *You have to "seize the day" and change the curriculum fundamentally to what the modern world needs in the next 10 to 20 years. Every time we talk only about reading, writing and arithmetic, we're just missing the show. I see the innovation and wealth creation that the transforming [international] economies are generating, and I worry about us.*

The real question seems to be: "What must Iowa do to gain **international** leadership in student achievement?"

But Iowa's Standing is Falling

Other states now surpass Iowa in the percentage of youngsters who are proficient learners. A key example is found in the National Assessment of Educational Progress (NAEP), often referred to as the "Nation's Report Card," where **Iowa has fallen from first in the nation (with Maine) in 1992 to 19th** in 2005 in fourth-grade reading proficiency. What must Iowa do to regain leadership in student achievement? The answer, as *The Des Moines Register* stated it, is to:

> *Sustain increases in funding and establish rigorous statewide standards for curriculum and assessment and high school graduation requirements.*[6]

Iowans Underestimate the Urgency

Many, if not most, Iowans fail to see that Iowa is experiencing an educational crisis. A primary factor is that individual Iowans feel that their children and grandchildren receive a more than adequate education. While state publicity during the past decade has promoted our educational system to lure new businesses, we have lost perspective on where we truly stand in comparison to a) where we've been, b) where other states are, c) where many other nations rank, and d) what are the new needs of the global marketplace.

A forum participant in Mason City said:

> *We need to not only focus on the reading, writing and math. We need to add to our standards. Very few kids know what goes on around them in the world in general.*

Iowa is caught in a vise that is threatening to squeeze the breath out of the quality of our lives. Pressure is coming from global economic competition; increased local poverty; significant demographic shifts; and very slow growth in population and high-skill, high-wage jobs. These are significant challenges.

Five Years into the New Millennium

We are already five years into the new millennium, and the reality can no longer be ignored. Iowa is not only falling behind on many measures that demonstrate educational adequacy, but also has no formal, comprehensive agreed-upon plan to catch up or even begin to compete in the global 21st century in which we all live and work.

The Iowa Legislature asked the Institute for Tomorrow's Workforce to examine these and other critical issues, and empowered the Institute to create a platform for bold reform. This report clearly demonstrates that Iowa education and the workplace of today and tomorrow are not aligned. Most important, in filing this state report, ITW strongly believes it is time for courageous action and change. Iowa's future depends on it.

For those who believe Iowa is a national or global leader in education, we have critical news to deliver:

The Iowa we once knew is not the Iowa of today.

The Facts

1. **Iowa has never articulated a statewide set of 21st-century educational standards.**

The federal "No Child Left Behind" Act (NCLB) requires a report of "proficiency" in reading, mathematics and science, which is based on standards and tests developed separately (and differently) by each state. Iowa's system is unique in that its "standards" are derived by working backwards from standardized tests, not vice versa, as other states do. The "standards" Iowa follows are those implicit in these tests.

For purposes of NCLB, the achievement of Iowa students is described in National Percentile Ranks (NPR) "score ranges," which are Low, Intermediate, and High. Students whose percentiles on the Iowa Tests are in the 1–40 range are in the Low level, those with NPRs from 41 through 89 are in the Intermediate level, and those with percentiles from 90 to 99 are in the High level. Each state is allowed to decide which levels of achievement are considered proficient and less-than-proficient. In Iowa, the Low level as defined above is "less-than-proficient," and the Intermediate and High levels grouped together are regarded as "proficient."

A Des Moines school board member told *The Des Moines Register*[7] that the Institute's recommendations should call for statewide academic standards. He said:

> *We're the only state in the country that doesn't have standards. We're being "arrogant" in thinking we know something that the other 49 states don't know. The reason we don't have statewide standards is to prop up rural school districts, and that's not helping kids in rural Iowa or other districts. Statewide standards will provide assurances that all of Iowa's high school graduates are receiving an equal education.*

Judged solely by statewide tests, 76 percent of our Iowa fourth-graders are proficient in reading. In fourth-grade reading, 35 percent are proficient on the National Assessment of Educational Progress (NAEP), often referred to as the "Nation's Report Card." With a 41-point gap, Iowa ranks 28th in the nation on the disparity between state and national performance measures for fourth-grade reading.[8]

- In math, 75 percent of fourth-graders achieve proficiency on the state math test, compared to 36 percent who do so on the NAEP. With a 39-point gap, Iowa ranks 28th in the nation on this measure.
- Among eighth-graders, 69 percent of students are proficient on the state reading test, while 36 percent achieve proficiency on the NAEP. With a 33-point gap, Iowa ranks 25th out of 47 states with data available on this measure.
- In math, 72 percent of eighth-graders achieve proficiency on the state math test, compared to 33 percent who do so on the NAEP. With a 39-point gap, Iowa ranks 36th out of 47 states with data available on this measure.

One school superintendent summarizes the dilemma:

> *I don't think there is unanimity in opinion about the federal NCLB. But it tells us exactly what it is the U.S. Department of Education wants us to produce in the areas of basic math, science and reading for grades 4, 8 and 11. That's one example of defining results, and we can do that.* ***But I don't think people are clear on what a "well-educated" high school kid is supposed to do as a result of being in our schools for 12 or 13 years.***

2. What is a 21st-century "well-educated" high school kid supposed to know?

The Iowa Department of Education has begun implementing Senate File 245 (2005) that calls for a voluntary "core curriculum" and builds on current "student proficiency indicators."[9] This should address the first recommendation of the *Partnership for 21st Century Skills* (below), which emphasizes teaching all core subjects "beyond basic competency."

The critical elements for creating 21st-century skills are enumerated by the *Partnership for 21st Century Skills*,[10] a national consortium of Fortune 500 employers, the U.S. Department of Education, and others:

- **Emphasize all core subjects** "beyond basic competency to the understanding of academic content at much higher levels."
- **Emphasize learning skills for lifelong learning** in three categories: a) information and communication skills, b) thinking and problem-solving skills, and c) interpersonal and self-directional skills.
- **Use 21st-century tools** to develop learning skills, specifically digital technology and communication tools to access, manage, integrate and evaluate information, construct new knowledge, and communicate with others in order to participate effectively in society.
- **Teach and learn in a 21st-century context** through real-world examples, applications and experiences both inside and outside of school, so learning can be engaging and meaningful to the lives of students.
- **Teach and learn 21st-century content**, especially: a) global awareness, b) financial, economic and business literacy, and c) civic literacy.
- **Use 21st-century assessments that measure 21st-century skills.** To be effective, sustainable and affordable, sophisticated assessments at all levels must use new information technologies to increase efficiency and timeliness.

3. School districts currently set their own K–12 standards and assessments, so there is wide variances among districts and no statewide verification of curricular rigor, relevance or individual student success.

School districts in Iowa study their reading, math and science programs to ensure that what the Iowa Tests assess is taught at appropriate grade levels. In addition, each school district establishes its own standards and benchmarks that are recorded in their local comprehensive school improvement reports. Many districts use other tests to assess progress on local standards. Variability negates comparison of results.

The "Iowa Department of Education's 2005 Annual Report" shows that all high schools ***offer*** the minimum number of required courses, but ***enrollments*** are dangerously low in higher-level math and science courses and vary dramatically in upper-level English, foreign language or technology studies.

4. Local high school graduation requirements are less than ACT recommends for college success. In some Iowa high schools, a student can graduate with only two years each of math and science.

Graduation requirements are set locally. The average number of math units for graduation in Iowa is 2.49. For science, the average number of units for graduation is 2.37. Of the districts, 47.1 percent require 2.0 units of math credit; 44.1 percent require 3.0 credits. In science, 58.8 percent require 2.0 units of credit; 33.8 percent require 3.0 credits. In contrast, ACT recommends the following high school coursework.

ACT Suggested Course of Study for Iowa High School Students

CREDITS	COURSEWORK
3.0	Math through at least algebra 2
3.0	Lab science, including physics
4.0	English
3.5	Social studies
2.0	Language other than English

Many forum participants suggested that schools should **abandon the Carnegie Unit** (55-minute class periods every day for a semester), which awards credits for "seat time" for high school graduation. The move would force Iowa's public **colleges and universities to accept performance-based proficiencies** as the primary criterion for college entry and enrollment. It would also require a strategy to **reduce the significance of "class-rank" and grade-point averages** as basic college readiness indicators.

It is a myth that: ***"It doesn't matter which classes I take in high school as long as my grade-point average is high."*** Students in forums said that, if courses were required for high school graduation, they would enroll in them. The ACT cautions:

> *If you're playing the GPA game and taking a light schedule that isn't challenging, it will catch up with you at the college level very quickly.*

To make our Iowa students world-class competitive, members of the ITW Board of Directors favor four years of instruction in math and science with specific training in modern computer sciences.

5. **Iowa ranks fourth nationally with preschoolers whose parents work out of the home. But Iowa ranks 40th nationally in the number of 4-year-olds enrolled in "accredited" preschools.**

Research shows that young children are the quickest to learn and may be able to learn exponentially more than we actually attempt to teach them. The organization *Early Childhood Iowa* reports on research that shows 85 percent of children's intellect, social skills and personality are developed by age 5. In a community forum, a university professor of early childhood education reported that 2-year-old children could easily learn what we previously thought appropriate only for 4-year-olds.

6. **There are serious achievement gaps between advantaged white youth and disadvantaged youth, particularly minority and second-language learners.**

Public school enrollment in Iowa is 88 percent white, almost 5 percent Hispanic, and 4.5 percent African-American. In Iowa's urban school districts, the portion of enrollment that is minority averages about one-third. The number of English-language learners has more than doubled in the past 10 years. In Iowa, where almost 90 percent of students graduate, only 50 percent of African-American and Hispanic students graduate from high school. The combined number of African-American and Hispanic students has increased from 5 percent to nearly 10 percent in the past decade.

> *Academic gaps [of any type] represent a fundamental failure in the promise of our education system to ensure that every child has the opportunity to reach his or her fullest potential. Reverberating through the lives . . . of children, these gaps stifle economic growth and endanger our democracy.*

All children and young adults need support to realize this imperative for a postsecondary preparation. But, for the growing concentration of poor and underserved in our cities and rural areas, gaining access to and paying the cost of a quality postsecondary education is a serious concern. Students in the poorest quarter of the population have an 8.6 percent chance of getting a college degree. Students in the top quarter have a 74.9 percent chance.[12]

About 30 percent (a 14-year high) of our public school students receive "free or reduced-price" meals, which is an indicator used frequently to estimate the low-income portion of any given school population. One school district reports 64 percent of its student population receives reduced-price meals.

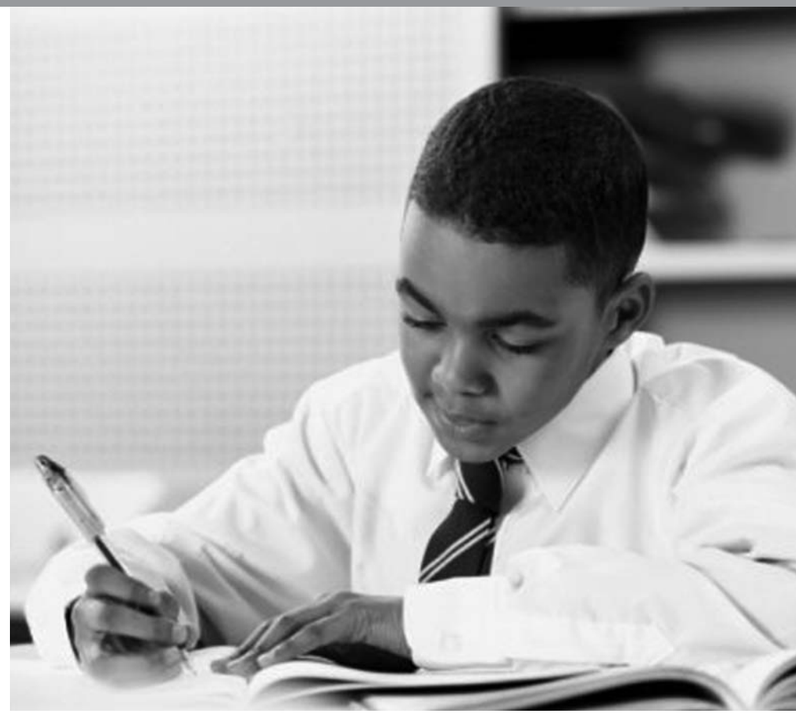
Our education system statewide is simply not reaching and encouraging our minority and disadvantaged students to meet the needed higher-level expectations. When we really examine ACT course-taking patterns, we find that, even in high school, our minority and low-income students are simply not in the pipeline to succeed in any postsecondary opportunity.

7. **There is a strong "disconnect" between schoolwork and lifework. Too many high school students say they see little relevance in their studies and have no great motivation to excel.**

Iowans generally describe high schools as academically focused, but rarely exciting or challenging. Our schools do not support all young people equally in attaining the skills and knowledge demanded for high-skill jobs or for college. Instead, too many reward students for compliance rather than for self-direction, more for memorizing information than for using it to solve problems, more for following routine than for making responsible decisions or for being creative, more for functioning in isolation than for being a community of citizens. Some said these attributes were commonly found in middle schools and colleges as well as in high schools.

Students we interviewed (all of whom had successfully matriculated to an Iowa university) said high school was more about social life and extracurricular activities than about meaningful learning. Perceived relevance was low; students encountered little in the content courses to get excited about. Many "blew off" their senior year, partly because in small schools they ran out of classes to take. The combination of a partial load, an open campus and (often) a job meant little learning during their senior year. Parents, they said, quietly tolerated their decision or actually concurred that it was okay to "take their senior year off."

According to several forum participants, *making learning more* ***relevant*** *will help to counteract this. Said one participant:* ***"You see those kids who aren't interested, and suddenly, they get into a program that is more 'hands-on,' and they just light up. How do we make that the norm and not the exception?"***



Our provocateur, Dr. Sharon Robinson, reminded us, rightly, that a performance-based system is much more than the "after action" box scores [standardized tests]. It requires demonstrations where students show publicly what they've learned, and where "performance criteria" are well understood and applied. This means "project-based" experiences for all learners, pre-K and up, and annual "internships" for high school and college students.

8. **We were encouraged to find that nearly 85 percent of Iowa's high school graduates aspire to attend college. But we were disappointed to learn that fully one-third of these aspirants drop out of college before their second year.**

Of 35,000 Iowa seniors, 85 percent say they want to and plan to attend college, up from 66 percent in 1995. In fact, 88 percent of Iowa's young women aspire to college. However, one-third of those who start college actually dropped out before their second year. Statistics and anecdotal accounts show that first-year college students are not prepared and struggle with academics, often in large lecture classes with limited personal counseling.

Students face their own immaturity, homesickness, and difficult social assimilation; they often lack self-direction, and school and living expenses are overwhelming. They need better preparation for these realities and/or more adequate counseling or remediation upon arrival. Otherwise, many students head for home, or into a downward spiral that spells "college dropout."

9. The rate of school district reorganization and statewide reform lags behind the needs of our students for a world-class education delivery system.

Iowa's early version of schooling has cut deep grooves in our collective memory. Although the one-room schools were all closed by the early 1960s, nostalgia has lingered. Schools are centers for community entertainment and identity, supporters of local ideals and aspirations, but more often the celebrated end of childhood than a vital transition into adulthood.

In the last 10 years, Iowa's public school enrollment is down more than 22,000 (4.4%), enough youngsters to fill a small city, and enough students for more than 20 "larger" school districts, by Iowa's standards. School enrollment is expected to drop another 1.67 percent by 2010. Many suggest that school reorganization has not caught up with enrollment declines, and that there are lost "economies." People say we must ask the state's **entire education system** (school districts, AEAs, state agencies and colleges) to "resize," using the same "standards of high performance" as we now propose for students and teachers.

10. What is the right size of a public school/school district?

Nationally, educators recommend an elementary school of at least 300–400 students and secondary schools of 400–500. The Education Commission of the States and the National Association of Secondary School Principals issue these as policy recommendations. Several foundations (such as The Bill and Melinda Gates Foundation) recommend smaller high school units of 300–400, allowing for teachers and students to create a better learning community. Therefore, high schools with 400 or fewer students **and** school districts with 700 or fewer students should be examined in terms of questions such as:

- Can the district provide a rigorous core curriculum in math, science, English and technology?
- Do the district per-pupil costs exceed the average range for midsize school districts?
- Have the district's average ACT scores for graduates fallen below Iowa average?
- Does any teacher perform more than three different course preparations daily?
- Can the district sustain a four-year high school of at least 400 students?
- Can the district sustain an elementary/middle school (K–8) of at least 180 students?
- Can the district pay competitive salaries for qualified teachers?

11. Education Technology — Programs started but not sustained

And, technologies of all sorts have tremendous potential for changing pre-K–12 education from an environment in which students are passive learners, to one in which students are active, engaged learners who continue learning beyond the classroom and regular school day.

> *If you look at the technology that kids up to eighth grade are using (text messaging, etc.), they're already integrating technology in their lives. We just need to put that* ***formally into education****, so we can apply the fun technology to their learning and skill set on the job.*

12. There is a need for bold leadership.

If Iowans are to prosper in the future, Iowa must develop the vision and conviction to build and sustain a world-class educational system that produces graduates who rank with the world's best. By modernizing our educational system in ways designed to meet the challenges that confront Iowa, and investing in that system, our state can better attract employers, bring new wealth into the state, benefit individuals and communities, and enhance the quality of life statewide.[13]

Promises Not Kept

Iowa spends less per pupil than five neighboring midwestern states — often far less.[14] Iowa ranks 36th in the nation in per-pupil expenditures, dropping from 25th in 1985–1986, and now is $1,058 below the national average (which computes to about $500 million per year). Programs started have not been sustained: minimum teacher salary increases, performance-based pay plan, school technology, and Phase III for professional development.

If students are going to compete in what is quickly becoming a global economy, then they are going to need to be adept in the 3Cs — collaboration, communication and creativity. Good teachers then must be well versed in new methodologies and technologies that can help their students work with their peers and produce knowledge (not just learn it) and become citizens of the world.

Research assembled during the past 15 years has convinced many policymakers and business leaders that **quality teachers** make the ***most important*** difference in whether students learn and achieve. But, despite the evidence on teaching quality, limited consensus exists on **how to best recruit, prepare, support and pay teachers** — and consequently — policymakers across the nation have struggled over how to best solve teacher supply and quality problems. Iowa is not alone in facing significant challenges for achieving consensus and momentum for meaningful and sustainable teaching quality reform, but the state does have the potential to distinguish itself with the boldness and effectiveness of its statewide commitment to build a true teaching profession capable of educating all students for success in the 21st century.

The average age of Iowa's teachers has grown considerably in the past 11 years. The percentage of teachers age 51–55 had the greatest increase (8.5%) between 1993–94 and 2004–05. Iowa will need to recruit thousands of teachers in the near future. Although Iowa's overall teacher shortage is an emerging issue, there are severe subject-area shortages in math, science and special education, and great difficulties in recruiting ethnic/racial minority teachers. As one ITW board member observed:

> *We agree that we need to raise teachers' salaries. There is a pragmatic reason. We can't attract people to teach in Iowa unless we pay more. We seem to think that we need to ask more or have them doing something different to deserve the salary, but there is also the issue of recruitment and retention.*

Another ITW board member concurred:

> *But we agree that we want to have "outcome measures." We also agree that we want to "professionalize" the teaching profession. What that means is time and energy. Think of a successful law firm, a successful medical practice, and a successful university department as models. Wherever you have a group of professionals working together who are "tasked with achieving a goal," you'll find exactly the kind of system you're trying to achieve here.*

Raising the minimum salary for Iowa teachers to the $32,000–$40,000 range, for example, would immediately achieve the national average for beginning teachers and raise average salaries for all teachers substantially. Such an increase would also make the teaching profession a more viable option for recent graduates considering other career paths. Anecdotal evidence from Iowa schools of education indicate that many outstanding graduates (especially in science and math) are being recruited and hired by the private sector at starting salaries approaching $45,000.

Focus on serving Iowa's kids

In preparation of this report, we are mindful of the words of encouragement and guidance from our provocateur, Dr. Sharon Robinson:

Your goal that every student be "credentialed" for the workforce is good for students and good for the community. Leaving high school able to face and pursue alternative scenarios and knowing that there are options for both college-bound and work-bound students are good for students and good for Iowa. I see in the goal for a postsecondary credential not only an explicit way for students to see themselves as ready for college or some vocational training, but also to see themselves as lifelong learners, because, if they have that understanding, they will truly be "empowered" workers. So a good teacher will have to develop in his/her students the skills of a competent learner. What does this mean?

Everyone, labor, business, education, etc., agrees that the "skills of a competent 21st-century learner" are collaboration, communication, problem-solving and analysis. These are the skills of the 21st century. Therefore, teachers must be able to collaborate, communicate, analyze situations and solve problems. It is that simple. But, as you know, it is also complex. I'm going to offer five principles of reform that might be helpful in your work. They are principles that should be evident in all schools and institutions of teacher preparation.

- ***Education is personal.***
  Every school should treat all students as personal individual-learners.
- ***Model competence.***
  This requires an education workforce capable of modeling competence as learners.
- ***Education is for building community.***
  Schools must not be isolated citadels or ghettoes, or places to warehouse kids until we are ready to integrate them into the workforce or welfare.
- ***The intellectual expectation should be the same for all students.***
  If schools are about community, all students must live and be involved in that community. Therefore, a standard of citizenship should derive from a standard of intellectual engagement that every student can experience.
- ***Be accountable, be accountable, and be accountable for continuous improvement.***
  Accountability ought to be about something that's bold, that's worthy, and that's worth hard work. Accountability that is based on a mission and its goals inspires action, providing there are resources and other encouraging elements of support.

Dr. Sharon Robinson, October 27, 2005
Comments to the ITW Board of Directors

AN AGENDA FOR CHANGE: YEAR-ONE RECOMMENDATIONS

The ITW believes Iowa's greatest imperative is that all learners are prepared for the 21st century. This means a postsecondary credential – diploma, college degree, license or certificate of employability – for all learners. Without this, Iowa young people won't be equipped for the global marketplace.

If our young people are to achieve this level of success, we believe that Iowa must commit to three basic recommendations: A) a performance-based system for learners, B) a performance-based system for educators, and C) a performance-based system for all elements of our statewide education system. For each broad recommendation, we are recommending critical first steps for fiscal year 2007.

To achieve the needed reform, the Institute for Tomorrow's Workforce's Agenda for Change embraces one primary principle:

Education in Iowa must be "performance-based."

A. Learner Performance	B. Educator Performance	C. System Performance
All learners pre-Kindergarten through postsecondary will demonstrate proficiency in 21st-century skills and knowledge based on developmentally appropriate assessments showing growth through measurable performances.	Educator excellence (and the accompanying salaries for teachers and principals) will be based on performance within a system that values quality and rewards professional development in teaching and learning.	The state's entire education system pre-Kindergarten through postsecondary will be learner-centered and organized to support learners and demonstrate efficiencies based on 21st-century measures of organizational/ operational competency.

A. Learner Performance

Establish a performance-based proficiency system in which learners pre-Kindergarten through postsecondary progress at their own rate regardless of age and demonstrate proficiency through their skills and knowledge.

2006 Actions

Begin work immediately to establish performance criteria for students, teachers, and school districts and the statewide system. The ITW should work with stakeholders and external consultants to establish both the content-area knowledge and skills and the assessments necessary to measure the content and skills to prepare Iowa learners for the demands of the 21st century.

Immediately require all Iowa high schools to offer a core curriculum (such as that recommended by ACT) and increase the number of students taking the **complete** ACT assessment (including the Writing Test) with a target of 50 percent of all high school students. In addition, the average score in Iowa should be maintained at 22, which is currently one point above the national average.

Require Iowa's public colleges and universities to accept performance-based proficiencies as the primary determiner of entry and enrollment requirement. Plan a three- to five-year strategy for replacing "class rank" and grade-point averages as basic indicators of college readiness with these new performance-based learner proficiencies that meet or exceed the old indicators.

Adopt our recommended goal to increase postsecondary graduation rates and student retention rates. As a state, Iowa must identify, expect and support the skills and knowledge that will be needed by our young people in the 21st century. Those skills build upon a rigorous academic core curriculum, but also include analyzing, managing and evaluating information in a variety of forms; communicating effectively; creativity and intellectual curiosity; critical thinking and problem-solving; teamwork and collaboration and other interpersonal and self-directional skills.

B. Educator Performance

Fund the 2001 Student Achievement and Teacher Quality Program and complete our state's commitment to a *bold new professional teacher performance/compensation model* that rewards educators for their own knowledge, skills and practices that prepare students for the 21st century.

2006 Actions

Fund the 2001 Student Achievement/Teacher Quality Program to complete the state's commitment to the bold professional teacher performance/compensation model. Salaries for college and university faculty should be examined for competitiveness. To embark on the primary goal of improving teaching and learning and become more competitive in recruiting talented professionals who might otherwise leave the state or pursue another profession, immediately raise the minimum teaching salaries to a range of $32,000–$40,000, with a goal of moving from 41st nationally to 25th in average teachers' salaries. Add a market factor to the plan that would allow Iowa schools to attract teachers in low-supply categories and disciplines. The range in salary should recognize geographic wage differentials and provide incentives for traditionally hard-to-staff schools, subject-area shortages, and for improving the racial/ethnic diversity on local teaching staffs. This will begin the transition to a performance-based model by implementing the current teacher compensation legislation and alleviate Iowa's low national ranking in teacher salaries.

C. System Performance

Design and implement a performance-based system for all elements of our statewide education system.

2006 Actions

The basic principle is that the state's education system must be a learner-centered and performance-based system where all elements are held to the same high standards of accountability, efficiency and competency we propose for our students and teachers.

The legislature should establish an independent Commission of education stakeholders with the authority to establish a new performance-based, learner-centered educational delivery system. The scope includes the structure and delivery methods with emphasis on both quality of services and efficiency of operations, including services (e.g., physical plant services, transportation, accounting, personnel services, purchasing, etc.).

The Commission will submit its findings and recommendations to the governor, the Iowa Legislature, and the Department of Education, not later than January 15, 2007. The plan submitted will address the changes required including the alignment of local school districts, AEAs, higher education and the Iowa Department of Education, with specific quantitative and qualitative indicators and recommendations on management, governance, faculty salaries, services, boundaries, funding, optimum size and administrative efficiencies. The legislature should confer upon the Commission the authority to prepare a new delivery system, which will be implemented unless the legislature and the governor reject it.

D. Funding Performance

To implement the ITW recommendations, the governor and the Iowa Legislature should provide funding to accomplish short-, intermediate- and long-range goals.

2006 Actions

Develop adequate financial support for a performance-based system. The ITW should conduct an independent and thorough review of how the pre-K–12 through community colleges system is financed. The call for redesigning the system to meet the new demands may require new thinking about financing and taxing structures as well as addressing adequacy, fairness and flexibility.

Iowa must face the fact that its per-pupil funding is well below the national average. Clearly, support for education must be increased if our recommendations are to be realized. We recommend that Iowa target the national average for per-pupil funding. We also believe that a well-developed definition for system performance, as suggested in the third and fourth recommendations, would allow a redistribution of resources that would add the margin of excellence necessary, once a mid-level per-pupil annual expenditure is reached. Immediate action should be taken this legislative session to secure the financial resources required to implement these recommendations and embark on a new Iowa educational system.

E. Ongoing Leadership Towards a Performance-Based System

2006 Actions

The membership of the **Institute for Tomorrow's Workforce** reflects the awareness that meaningful and lasting educational change requires sustained support and collaboration from leaders in business, industry, government and education.

The State of Iowa, with the Institute for Tomorrow's Workforce and the private sector, should organize and deploy a public relations campaign (possibly in conjunction with other state or national initiatives) to heighten awareness of the critical situation described above. The campaign should involve the advocacy and resources of business, research and education, but center on a common message, using common materials and a bona fide public relations design. It would involve all media: forums, focus groups, polling and town meetings, and networks of organizations and associations investing resources along with state government in this joint campaign to enlist the hearts and minds of all Iowans in making this critical need for "preparedness" an imperative for all.

In addition, the work of the Institute reflects a response to the following critical needs for education improvements in Iowa:

- The need for an education system built on partnerships among students, parents, educators, the communities of business and industry, and the people of the state of Iowa and focused on continuous improvement to meet emerging needs;
- The need for an education system driven by understanding of student needs and focused on high expectations;
- The need for expanded professional development efforts for our educators;
- The need for leadership and advocacy by the state, its communities, and Iowa business and industry.

To meet the needs of today's students, parents, business people, community leaders, labor officials and policymakers all need to work in partnership with education. Together, we can help with the daunting task of keeping education up-to-date with the accelerating pace of change in technology and the economy and maintain the long-term effort that we need to be successful.

We also need to build more partnerships within education, as well. Our nation is only now, decades after most women entered the workforce, coming to grips with the need to link early care and education with the rest of education in a more cohesive way. And we need to expand on existing partnerships to coordinate the transition from high schools to college and university opportunities.

The ITW Board of Directors recommends legislative funding sufficient to maintain the ITW, its basic operational needs, and to follow through on the recommendations made herein.

Conclusion

These recommendations focus on some actions that can be initiated immediately, while others will require continued pursuit into the future. Is this enough to address our current crisis? Absolutely not.

Clearly, constantly improving and refining our approaches to educating our youth will require a comprehensive, long-term plan developed in partnership with state government, business and education. However, we must begin moving forward now. **The Institute for Tomorrow's Workforce** is united on this agenda. We will continue to provide the leadership needed to help Iowans realize the dimensions of the problem and the urgency for solutions.

This generation of education and business leaders now faces new challenges, both at home and abroad. Any number of countries in Asia and Europe are educating and training their citizens and competing with — and, in several cases, beginning to surpass — the United States for talent to develop new technologies, new cures, new frontiers. If we take our scientific and technological supremacy for granted, we risk losing it.

What we are lacking at the moment is not so much the wherewithal to meet the challenge, but the will.

Institute for Tomorrow's Workforce

A Long-Term Forum For Bold, Innovative Recommendations To Improve Iowa's Education System

Legislative Charge

In 2005, the Iowa Legislature created the Institute for Tomorrow's Workforce (ITW), a nonprofit organization, to study Iowa's pre-kindergarten through postsecondary public school system. The General Assembly called on the ITW to initiate "a long-term forum for bold, innovative recommendations to improve Iowa's education system to meet the workforce needs of Iowa's new economy." The framework from which the ITW files its report, as directed by the legislature:

Standards

- Review educational standards to determine relevance and rigor necessary for continuous improvement in student achievement and meeting workforce needs.

Skills

- Identify the jobs skills and corresponding high school coursework needed to achieve success in Iowa's workforce.
- Review the state's education accountability measures including, but not limited to, student proficiency and individual and organization program accountability.

Barriers

- Identify state and local barriers to improved student achievement and student success as well as barriers to sharing among and within all areas of Iowa's education system.
- Identify ways to reduce the achievement gap between white and non-white, non-Asian students.
- Identify effective education structure and delivery models that promote optimum student achievement opportunities for all Iowa students that include, but are not limited to, the role of technology.

Collaboration and Partnerships

- Promote partnerships between private sector business and all areas of Iowa's education system.
- Promote partnerships between other Iowa governance structures including, but not limited to, cities and counties, and all areas of Iowa's education system.
- Serve as a clearinghouse for existing and emerging innovative educational sharing and collaboration among and between Iowa's secondary and postsecondary education systems.

The Institute for Tomorrow's Workforce is to submit findings and recommendations by January 15 annually (beginning in 2006) to the:

- Governor, Speaker of the House of Representatives, President of the Senate
- Iowa Board of Education, Iowa Board of Regents
- Departments of Workforce Development; Economic Development; and Education
- Iowa Association of Community College Trustees, College Student Aid Commission
- Iowa Association of Independent Colleges and Universities
- Associations representing school boards, nonpublic schools, area education agencies and teachers

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END NOTES

[1] Iowa Press, Iowa Public Television, November 25, 2005.

[2] The concepts reflected in these statistics are from *Conceptualizing and Researching the Educational Pipeline*, by Peter T. Ewell, Dennis P. Jones, and Patrick J. Kelly of The National Center for Higher Education Management Systems. Data are from 2002. For most current data, see The National Information Center for Higher Education Policymaking and Analysis website at www.higheredinfo.org. The Educational Pipeline analysis conveys the importance of viewing student progress as a continuum leading from high school into postsecondary education and through to the completion of a college degree. The Educational Pipeline, rather than viewing K–12 schooling and postsecondary education as separate entities, estimates the state-by-state patterns of student progress from the ninth grade through four key transition points: (1) high school graduation within four years of entering high school; (2) enrollment in college the fall semester after receiving a high school diploma; (3) return for the second year of college; and (4) completion of an associate's degree within three years or a bachelor's degree within six years of enrolling in college. The Educational Pipeline enables states to compare patterns of student progress with other states and with national averages. States vary widely in these patterns: Many states that have similar results at the end of the pipeline (that is, in the proportion of students completing college) find that they lose students at different transition points along the way. The Pipeline data assist states in designing interventions that address their particular educational challenges. Cited in Condition of the State Message, 2005.

[3] TAPPING AMERICA'S POTENTIAL: The Education for Innovation Initiative, July 2005.

[4] Hilary Pennington, "Accelerating Advancement in School and Work," *Brookings Papers on Education Policy*: 2003, Diane Ravitch, ed. (Washington, DC: Brookings Institution Press, 2003).

[5] *The New York Times*, December 8, 2005.

[6] *The Des Moines Register*, November 27, 2005.

[7] *The Des Moines Register*, December 16, 2005.

[8] Cynthia G. Brown, et al. (August 2005). "Getting Smarter, Becoming Fairer: A Progressive Education Agenda for a Stronger Nation. Renewing Our Schools, Securing Our Future: A National Task Force on Public Education," A Joint Initiative of the Center for American Progress and the Institute for America's Future, Washington, DC.

[9] **Iowa's student-proficiency** indicators are:

a. The percentage of all fourth-, eighth- and 11th-grade students achieving proficient or higher reading status on the ITBS and ITED;
b. The percentage of all fourth-, eighth- and 11th-grade students achieving proficient or higher mathematics status on the ITBS and ITED;
c. The percentage of all eighth- and 11th-grade students achieving proficient or higher science status on the ITBS and ITED;
d. The percentage of students considered as dropouts for grades 7 to 12 and the percentage of the high school students who graduate;
e. The percentage of high school seniors who intend to pursue postsecondary education/training;
f. The percentage of high school students achieving an ACT national average score or above and the percentage of students achieving an ACT score of 20 or above; and
g. The percentage of high school graduates who complete a "core" high school program of four years of English-language arts and three or more years each of mathematics, science, and social studies.

[10] The work of identifying Iowa's Knowledge and Skills for the 21st Century should be based upon the recommendations of the *Partnership for 21st Century Skills*. **The Partnership for 21st Century Skills,** which is the leading advocacy organization focused on infusing 21st-century skills into education, has more than doubled its membership, growing from eight founding organizations in 2002 to 20 members representing America's leading business, technology and education organizations. The new members include: Agilent Technologies; American Association of School Librarians, a division of the American Library Association; American Federation of Teachers; Bell South Foundation; Corporation for Public Broadcasting; ETS; Ford Motor Company; Intel Corporation; JA Worldwide; Oracle Corporation; Texas Instruments and Verizon. These organizations join the Partnership's founding members including Apple, Cable in the Classroom, Cisco Systems, Dell, Microsoft, the National Education Association, SAP and Time Warner. "http://www.21stcenturyskills.org/.

[11] Cynthia G. Brown, et al. (August 2005).

[12] David Brooks, "The Education Gap," *The New York Times*, September 25, 2005.

[13] Adapted from reports of the Iowa Learns Council, 2004; the Governor's Commission on Educational Excellence for the 21st Century, 1997; and the Iowa Teacher Compensation Design, 2000.

[14] National Education Association. Cited in "Iowa Condition of Education Report 2005," Iowa Department of Education, 2005. *The Des Moines Register*, November 27, 2005.

THE INSTITUTE FOR TOMORROW'S WORKFORCE
An Iowa Nonprofit Educational Foundation